PATENT
Attorney Docket No.: PD-970567C
Customer No.: 020991

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	:	Examiner: K. Harper
DOUGLAS M. DILLON	)	
	:	Group Art Unit: 2664
Appln. No.: Unassigned (Divisional of Appln. No. 09/049,334 filed March 27, 1998)	) :)	
Filed: December 5, 2001	)	
For: SYSTEM AND METHOD FOR MULTICASTING MULTIMEDIA CONTENT	) :)	December 6, 2001

BOX PATENT APPLICATION
Commissioner for Patents
Washington, DC 20231

PRELIMINARY AMENDMENT

Sir:

Prior to examination on the merits, please amend the above-identified application as follows:

IN THE SPECIFICATION:

Please insert the following paragraph starting at page 1, line 3:

--This is a division of Application No. 09/049,334 filed March 27, 1998, which claims the benefit of U.S. Provisional Application No. 60/063,692 filed October 27, 1997.--.

Please substitute the following paragraph for the paragraph starting at page 13, line 16 and ending at page 13, line 29. A marked-up copy of this paragraph, showing the changes made thereto is attached.

Referring to Fig. 2, the WebCast system of the present invention consists of a back-end subsystem 22 which communicates with one or more multicast networks 24 (link C). The back-end subsystem 22 is connected to a plurality of web sites 18 (from which content is gathered) via a TCP/IP internetwork, such as the Internet 14 (links A, B). The multicast network 24 multicasts information retrieved from the web sites 18 to a plurality of receivers 26 over a high-speed link (F), such as a satellite or other high-speed (over 200 kbps) link. Each receiver 26 may be, for example, a personal computer in a user's home or business. However, the receivers 26 may also comprise set top boxes, digital televisions or other devices capable of receiving Internet content. Each receiver 26 is also preferably connected to the Internet 14 by a low-speed link (D), which may be, for example, dial-up modem, ISDN, two-way cable, or the like. Further, the present invention could be implemented with other TCP/IP networks other than the Internet, such as intranets.

IN THE CLAIMS:

Please cancel Claims 1 through 196 without prejudice to or disclaimer of the subject matter recited therein.

Please add new Claims 197 through 242 as follows:

197. (New) A method comprising:

accessing a URL at a first time to obtain a first HTML document and at a later time to obtain a second HTML document; and

difference compressing the second HTML document as compared to the first HTML document.

198. (New) A method according to Claim 197, further comprising multicasting the difference compressed second HTML document.

199. (New) A method according to Claim 197, further comprising multicasting the first HTML document and multicasting the difference compressed second HTML document.

200. (New) A method comprising:

obtaining first and second HTML documents associated with the same URL;

determining whether the first and second HTML documents have data in common;

preparing a compressed version of the second HTML document wherein data in common with the first HTML document is omitted and a reference to where the data is located in the first HTML document is included.

201. (New) A method according to Claim 200, wherein the reference comprises identification of a starting byte and an ending byte.

202. (New) A method according to Claim 200, further comprising multicasting the compressed version of the second HTML document.

203. (New) A method according to Claim 200, further comprising multicasting the first HTML document and multicasting the compressed version of the second HTML document.

204. (New) A method according to Claim 200, wherein said obtaining step obtains the first and second HTML documents from the same URL at different times.

205. (New) A method comprising:

receiving a first HTML document associated with a URL and thereafter a difference compressed HTML document associated with the URL; and

decompressing the difference compressed HTML document by replacing references therein to data in the first HTML document with the data from the first HTML document.

206. (New) A method according to Claim 205, wherein in said receiving step the difference compressed HTML is received via multicast.

207. (New) A method according to Claim 205, wherein in said receiving step the first HTML document is received via multicast and the difference compressed HTML is received via multicast.

208. (New) A method comprising:

receiving a first HTML document associated with a URL and thereafter a file that is prepared by comparing a second HTML document associated with the URL to the first HTML document and based upon the comparison omitting data in common with the first HTML document while including a reference to where the data is located in the first HTML document; and

obtaining the second HTML document by replacing in the file the reference to where the data is located in the first HTML document with the data from the first HTML document.

209. (New) A method according to Claim 208, wherein in said receiving step, the file is received via multicast.

210. (New) A method according to Claim 208, wherein in said receiving step, the first HTML document is received via multicast and the file is received via multicast.

211. (New) An apparatus comprising:

an HTML document difference compressor that is configured to access a URL at a first time to obtain a first HTML document and at a later time to obtain a second HTML document, and to difference compress the second HTML document as compared to the first HTML document.

212. (New) An apparatus according to Claim 211, further comprising a multicasting unit that is configured to multicast the difference compressed second HTML document.

213. (New) An apparatus according to Claim 211, further comprising a multicast unit that is configured to multicast the first HTML document and to multicast the difference compressed second HTML document.

214. (New) An apparatus comprising:

a determining unit that is configured to determine whether first and second HTML documents associated with the same URL have data in common; and

a compression unit that is configured to prepare a compressed version of the second HTML document wherein data in common with the first HTML document is omitted and a reference to where the data is located in the first HTML document is included.

215. (New) An apparatus according to Claim 214, wherein the reference comprises identification of a starting byte and an ending byte.

216. (New) An apparatus according to Claim 214, further comprising a multicasting unit that is configured to multicast the compressed version of the second HTML document.

217. (New) An apparatus according to Claim 214, further comprising a multicasting unit that is configured to multicast the first HTML document and to multicast the compressed version of the second HTML document.

218. (New) An apparatus according to Claim 214, wherein the first and second HTML documents are obtained from the same URL at different times.

219. (New) An apparatus comprising:

a receiving unit that is configured to receive a first HTML document associated with a URL and thereafter a difference compressed HTML document associated with the URL; and

a decompression unit that is configured to decompress the difference compressed HTML document by replacing references therein to data in the first HTML document with the data from the first HTML document.

220. (New) An apparatus according to Claim 219, wherein said receiving unit receives the difference compressed HTML document via multicast.

221. (New) An apparatus according to Claim 219, wherein said receiving unit receives the first HTML document via multicast and receives the difference compressed HTML document via multicast.

222. (New) An apparatus comprising:

a receiving unit that is configured to receive a first HTML document associated with a URL and thereafter a file that is prepared by comparing a second HTML document associated with the URL to the first HTML document and based upon the comparison omitting data in common with the first HTML document while including a reference to where the data is located in the first HTML document; and

a processing unit that is configured to obtain the second HTML document by replacing in the file the reference to where the data is located in the first HTML document with the data from the first HTML document.

223. (New) An apparatus according to Claim 222, wherein said receiving unit receives the file via multicast.

224. (New) An apparatus according to Claim 222, wherein said receiving unit receives the first HTML document via multicast and receives the file via multicast.

225. (New) An apparatus comprising:

means for difference compressing an HTML document as compared to an HTML document earlier obtained from the same URL; and

means for multicasting the difference compressed HTML document.

226. (New) An apparatus comprising:

HTML document difference compression means for accessing a URL at a first time to obtain a first HTML document and at a later time to obtain a second HTML document, and for difference compressing the second HTML document as compared to the first HTML document.

227. (New) An apparatus according to Claim 226, further comprising multicasting means for multicasting the difference compressed second HTML document.

228. (New) An apparatus according to Claim 226, further comprising multicasting means for multicasting the first HTML document and to multicast the difference compressed second HTML document.

229. (New) An apparatus comprising:

determining means for determining whether first and second HTML documents associated with the same URL have data in common; and

compressing means for preparing a compressed version of the second HTML document wherein data in common with the first HTML document is omitted and a reference to where the data is located in the first HTML document is included.

230. (New) An apparatus according to Claim 229, wherein the reference comprises identification of a starting byte and an ending byte.

231. (New) An apparatus according to Claim 229, further comprising multicasting means for multicasting the compressed version of the second HTML document.

232. (New) An apparatus according to Claim 229, further comprising multicasting means for multicasting the first HTML document and to multicast the compressed version of the second HTML document.

233. (New) An apparatus according to Claim 229, wherein the first and second HTML documents are obtained from the same URL at different times.

234. (New) An apparatus comprising:

receiving means for receiving a first HTML document associated with a URL and thereafter a difference compressed HTML document associated with the URL; and

decompressing means for decompressing the difference compressed HTML document by replacing references therein to data in the first HTML document with the data from the first HTML document.

235. (New) An apparatus according to Claim 234, wherein said receiving means receives the difference compressed HTML document via multicast.

236. (New) An apparatus according to Claim 234, wherein said receiving means receives the first HTML document via multicast and receives the difference compressed HTML document via multicast.

237. (New) An apparatus comprising:

receiving means for receiving a first HTML document associated with a URL and thereafter a file that is prepared by comparing a second HTML document associated with the URL to the first HTML document and based upon the comparison omitting data in common with the first HTML document while including a reference to where the data is located in the first HTML document; and

processing means for obtaining the second HTML document by replacing in the file the reference to where the data is located in the first HTML document with the data from the first HTML document.

238. (New) An apparatus according to Claim 237, wherein said receiving means receives the file via multicast.

239. (New) An apparatus according to Claim 237, wherein said receiving means receives the first HTML document via multicast and receives the file via multicast.

240. (New) A method according to Claim 200, wherein the reference comprises identification of a starting location for the data.

241. (New) An apparatus according to Claim 214, wherein the reference comprises identification of a starting location for the data.

242. (New) An apparatus according to Claim 229, wherein the reference comprises identification of a starting location for the data.

REMARKS

This application is a divisional application of Application No. 09/049,334 filed March 27, 1998 (the "'334 Application"), which claims the benefit of U.S. Provisional Application No. 60/063,692 filed October 27, 1997.

Claims 147 through 242 are pending, with Claims 197, 200, 205, 208, 211, 214, 219, 222, 225, 226, 229, 234, and 237 being independent. Claims 1 through 196 have been cancelled without prejudice. Claims 197 through 242 have been added.

REQUEST FOR INTERVIEW

If any questions remain, Applicant respectfully requests that the Examiner contact Applicant's undersigned representative, John T. Whelan, at (301) 428-7172.

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CONCLUSION

Applicant submits that this application is in condition for allowance, and a Notice of Allowance is respectfully requested.

Applicant's undersigned attorney may be reached at (301) 428-7172. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

12-06-01

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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO SPECIFICATION

Paragraph for the paragraph starting at page 13, line 16 and ending at line 29. A marked-up copy of this paragraph, showing the changes made thereto is attached.

Referring to Fig. 2, the WebCast system [20] of the present invention consists of a back-end subsystem 22 which communicates with one or more multicast networks 24 (link C). The back-end subsystem 22 is connected to a plurality of web sites 18 (from which content is gathered) via a TCP/IP internetwork, such as the Internet 14 (links A, B). The multicast network 24 multicasts information retrieved from the web sites 18 to a plurality of receivers 26 over a high-speed link (F), such as a satellite or other high-speed (over 200 kbps) link. Each receiver 26 may be, for example, a personal computer in a user's home or business. However, the receivers 26 may also comprise set top boxes, digital televisions or other devices capable of receiving Internet content. Each receiver 26 is also preferably connected to the Internet 14 by a low-speed link (D), which may be, for example, dial-up modem, ISDN, two-way cable, or the like. Further, the present invention could be implemented with other TCP/IP networks other than the Internet, such as intranets.